

Appl. No. 09/817,107

### REMARKS

This is in response to the Office Action of 29 January 2004. Claims 1-11 are pending in the application, and Claims 1-11 have been rejected.

By this Response and Amendment, Claim 4 has been amended in a non-narrowing manner, and arguments traversing the rejections are presented.

No new matter has been added.

In view of the amendments above and remarks below, Applicants respectfully request reconsideration and further examination.

#### About The Invention

The present invention relates generally to an integrated circuit including a heat programmable memory element formed from an electrically conducting organic material having electrodes and a bridge disposed between the electrodes, the bridge having a smaller size than the electrodes.

#### Non-narrowing Amendment of Claim 4

Claim 4 has been amended to remove reference numerals therefrom. Applicants respectfully assert that the scope of Claim 4 has not been narrowed, and that no narrowing of Claim 4 is intended by this amendment.

#### Rejections under 35 USC 112, second paragraph

Claims 7-9 have been rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that Claims 7-9 disclose a first patterned conductor layer on a substrate, in which layer the bridge and first transistor electrode of the first transistor are present. More particularly, the Examiner states that "it is unclear what is meant by layering the bridge and first transistor electrode 'are present'", and the Examiner asks whether it is covering both the layers.

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For at least the reasons set forth below, Applicants respectfully traverse the rejection of Claims 7-9 under 35 USC 112, second paragraph, and request that these rejections be withdrawn.

Applicants note that the word "layering" is not used in Applicants' Claim 7. More particularly, Applicants note that the language of Claim 7 recites a first patterned electrically conducting layer that is present on a substrate; a bridge of the memory element; and a first transistor electrode. Claim 7 specifies that both the bridge and the electrode are present in that first patterned electrically conducting layer. In other words, both the bridge of the memory element, and the first electrode of the first transistor, are formed by patterning the first electrically conducting layer. Therefore the recited bridge and electrode are present in the recited layer. Support for this can be found in the specification at page 8, lines 15-28, and in Fig. 2.

In view of the foregoing, Applicants respectfully submit that the meaning of Claim 7 is clear and that the rejection of Claim 7 should be withdrawn. Similarly, the rejections of Claims 8-9, which depend from Claim 7, should also be withdrawn.

Rejections under 35 USC 103(a)

Claims 1 and 4-11 have been rejected under 35 USC 103(a) as being unpatentable over Chung (US Patent 6,404,643). Claims 2-3 have been rejected under 35 USC 103(a) as being unpatentable over Chung in view of Ikefuji, et al., (US Patent 6,601,770).

For at least the reasons set forth below, Applicants respectfully traverse the rejections of Claims 1 and 4-11 under 35 USC 103(a), and request that these rejections be withdrawn.

Applicants respectfully submit that the Examiner has misapplied the

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teachings of Chung to Applicants' claimed invention. For example, element 404 in Chung's Figs. 11 and 14, which is cited by the Examiner, is actually a loop antenna, and not the claimed memory element. This loop antenna is not a programmable device as is Applicants' claimed memory. Similarly, Applicants' Claims recite an electrically conducting organic material, whereas loop antenna 404 is not formed of an electrically conducting organic material. In fact, loop antenna 404 is formed of an electrically insulating thermoplastic, and is only made electrically conductive by including electrically conductive particles therein to form an electrical pathway (see Chung at col. 10, lines 62-65). Furthermore, Chung illustrates the loop antenna as having uniform thickness, which is unlike Applicants' claimed memory element, because the Claimed memory element includes a bridge disposed between first and second electrodes; and the claimed "bridge" is clearly described in Applicants' specification as being smaller in size than the electrodes.

Since Chung does not appear to disclose, suggest, or provide motivation for the invention defined by Claim 1, Applicants respectfully submit that the rejection of Claim 1 is improper, and should therefore be withdrawn. Similarly, Applicant further submits that the rejections of Claims 4-11, which incorporate the recitations of Claim 1, are also improper, and should be withdrawn.

For at least the reasons set forth below, Applicants respectfully traverse the rejections of Claims 2-3 under 35 USC 103(a), and request that these rejections be withdrawn.

Applicants respectfully submit that the Examiner has misapplied the teachings of Chung and Ikefuji, et al., to Applicants' claimed invention. For example, the Examiner states that it would be obvious to modify the teachings of "Chung by incorporating a transistor to the system to switch connection of a resistor RM while the non-contact type interrogator outputs non-modulated carrier wave as taught by Ikefuji". However, Applicants' Claim 2 requires a transistor coupled to a heat programmable memory element that is made from an

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electrically conductive organic material, and has nothing to do with non-modulated carrier waves, or non-contact type interrogator outputs. Similarly, Claim 3 recites "an electrical conductor track being arranged for limiting heat dissipation from the bridge, perpendicular projections of said conductor track and of the bridge on the substrate overlapping each other", and there is no teaching of heat dissipation limiting arrangements in the disclosure of Ikefuji, et al. Additionally, as set forth in detail above in connection with the arguments traversing the rejections of Claims 1 and 4-11, the Examiner appears to have mischaracterized Chung's thermoplastic loop antenna having electrically conductive particles therein and a uniform width, as being the same as Applicants' claimed electrically conductive organic material heat programmable memory element having electrodes and a bridge of different sizes.

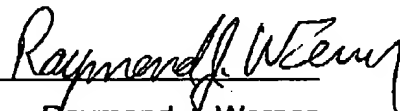
Since the references do not appear to disclose, suggest, or provide motivation for the invention defined by the Claims 2-3, Applicant respectfully submits that the rejection of Claims 2-3 is improper and should be withdrawn.

#### Conclusion

All of the rejections in the outstanding Office Action of 29 January 2004 have been responded to, and Applicants respectfully submit that the pending Claims 1-11 are now in condition for allowance.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

By 

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Portland, Oregon